

PMC-EF2a

(20102)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**



RECIPIENT: NREL

STATE: CO

PROJECT TITLE : Installation and Testing of the Alstom Power Inc. Eco 100 Wind Turbine at the NWTC; NREL Tracking No. 10-025

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
		NREL-10-025	0

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

DOE/EA-1378	Final Site-Wide Environmental Assessment of the National Renewable Energy Laboratory's National Wind Technology Center
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Rational for determination:

This proposed project would consist of the execution of a Cooperative Research and Development Agreement (CRADA) with Alstom Power, Inc. for the installation of a multi-megawatt wind turbine and associated infrastructure at the National Renewable Energy Laboratory's (NERL) National Wind Technology Center (NWTC), located southeast of the intersection of Colorado Highway (CO) 93 and CO-128, in the County of Jefferson, State of Colorado. The NWTC is a federally-owned facility that consists of 305 acres and is primarily utilized for wind energy research, development, and testing.

This turbine would be the first 60Hz version of this turbine model. The 50Hz version of this turbine is in serial production in Europe. The turbine would have a 3MW capacity with a 100m rotor diameter and would be installed on a 90m tower. The 60Hz version of the Eco 100 would undergo certification and field testing at NWTC, including power quality, acoustic noise, frequency measurements, and power performance. Certification of the Eco 100 would mitigate risk for Alstom and allow them to ramp up production in the United States. This CRADA would provide Alstom with the testing needed to obtain certification. The Eco 100 uses the Alstom proprietary drivetrain concept. This concept protects the gearbox from rotor bending loads in order to improve reliability. An important part of the CRADA would look at validation and further understanding of this concept for NREL.

Specifically, the scope of the proposed project would include the improvements to access road onsite; development of a turbine foundation (19m x 19m x 4.5m deep) at site 4.1; installation of an ECO 100 wind turbine on a 90m tower with a 100m rotor sweep; trenching to existing data shed at site 4.0 (3 ft x 800 ft x 3 ft deep); use existing Met tower at site 4.0; testing and certification of the turbine for approximately 2.5 years; and removal turbine and foundation upon completion of testing and certification.

Any excavated soils which are not able to be re-used onsite would be removed following completion of construction activities, and the area revegetated in accordance with NREL Procedure 6-2.16: Stormwater Pollution Prevention for Construction Activities: NWTC. Construction contractors would conduct concrete washout activities in accordance with NREL Procedure 6-2.16. A storm water associated with construction activity Notice of Intent (NOI) under the US EPA General Construction Permit would be filed with Region VIII EPA if the area of disturbance is greater than 1.0 acre. A storm water pollution prevent plan would be developed by the contractor in accordance with NREL Procedure 6-2.16 and the US EPA General Construction Permit. Fugitive dust would be controlled in accordance with land disturbance Air Pollutant Emission Notice (APEN) for the NWTC. Low impact installation techniques would be utilized to protect stormwater quality and control fugitive dust impacts. Per agency consultations conducted during the Site-Wide Environmental Assessment for the NWTC (DOE/EA-1378), no cultural resources, threatened or endangered species, wetlands, floodplains, or prime farmlands would be impacted by this proposed project. Consultations with the FAA are ongoing and a FAA permit application has been submitted. FAA required tower lighting and strobes would be installed

as required. If any construction or construction-related activities (i.e., surveying, offroad vehicle traffic, trenching, etc.) occurs between March and September, a survey for ground-nesting birds would be completed by NREL's ESH&Q Office before these activities are initiated per NREL policy. NREL and all contractors would follow all federal, state, local safety and security regulations.

The addition of three (3) additional "large scale" multi-megawatt wind turbines (for a site total of five) was analyzed as part of the proposed action in the May 2002 Final Site-Wide Environmental Assessment of National Renewable Energy Laboratory's National Wind Technology Center (DOE/EA-1378). The proposed action in this assessment also included the installation and removal of meteorological towers and instrumentation and associated facilities; maintenance and monitoring of atmospheric and wind turbine experiments, tests, and certifications; and upgrade and modifications of onsite roads. A Finding of No Significant Impact determination for DOE/EA-1378 was issued in May 2002. As this proposed project was analyzed as part of the proposed action in DOE/EA-1378 and with no extraordinary circumstances identified, the May 2002 FONSI determination applies to this proposed action.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

EF2A submitted by Rob Smith on 07/08/2010

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

Lori Plummer
NEPA Compliance Officer

Date: _____

7/9/2010

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- ☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- ☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____

Field Office Manager

Date: _____